

CLAIMS

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1. A method of effecting a cashless payment transaction by means of a merchant station (1) characterized by a merchant station identification code, a mobile cell phone (2) with a SIM card characterized by an identification code identifying it, and a comparing device (3), which comprises a transaction data memory device (10), a merchant checking device (11) for checking the identification codes of the merchant stations authorised for this method, and a subscriber checking device (12) for checking the identification codes of the SIM cards authorised for this method and which is connected to account keeping devices (15), comprising the steps:
 - reading an amount of money to be paid into the merchant station,
 - transmitting the identification code of the merchant station and at least the amount of money to the comparing device with *this identification code* through a data link,
checking the authority of the merchant station for the method, using the merchant checking device,
terminating the method in the absence of the authority, otherwise writing the data as an open transaction into the transaction memory device of the comparing device,
making a connection from the mobile cell phone to the comparing device,
transmitting the identification code of the merchant station and the identification code associated with the SIM card from the mobile cell phone to the comparing device,
checking the authority of the SIM card for the method, using the subscriber checking device,
in the absence of the authority terminating the method, clearing the open transaction from the transaction memory and transmitting corresponding data to the merchant station, otherwise comparing the merchant station identification code transmitted from the mobile cell phone with those of the open transactions stored in the transaction memory device and on failure to find such a transaction terminating the process and, on finding the process,
transmitting the transaction data to the mobile cell phone,
outputting the data through the mobile cell phone,
requesting confirmation information through the mobile cell phone,
transmitting the confirmation data to the comparing device,
terminating the transaction and clearing the transaction from the transaction memory if the confirmation data corresponds to a refusal, and transmitting the transaction data from the transaction memory and the identification code of the mobile cell phone to an account keeping device and clearing the transaction from the transaction memory in the alternative case.

2. A method according to claim 1, characterized in that the merchant station (1) and the cell phone (2) have interfaces (6) for wireless transmission of data from the merchant station to the cell phone, and in that the identification code of the merchant station is transmitted to the mobile cell phone through these interfaces for wireless transmission before the mobile phone connection to the comparing device (3) is made, and in that the identification code stored there can be transmitted during the existence of the connection to the comparing device.
3. A method of effecting a cashless payment transaction by means of a merchant station (1) characterized by a merchant station identification code, a mobile cell phone (2) with a SIM card and an identification code associated with the SIM card and a comparing device (3), which comprises a transaction memory device (10), a merchant checking device (11) for checking the identification codes of the merchant stations authorised for this method, and a subscriber checking device (12) for checking the identification codes of the SIM cards authorised for this method and, in the case in which the identification code of the SIM card is not its telephone number, for storing the telephone numbers associated with the SIM cards, and which is connected to account keeping devices (15), comprising the steps:
reading into the merchant station the amount of money to be paid and the identification code of a SIM card of a mobile cell phone,
transmitting the identification code of the merchant station, the identification code of the mobile cell phone and at least the amount of money to the comparing device with this identification code over a data link,
checking the authority of the merchant station for the method by comparison with the entries in the merchant checking device, checking the authority of the SIM card for the method using the subscriber checking device,
terminating the method in the absence of authority, otherwise writing the data as an open transaction into the transaction memory device,
in the case in which the identification code of the SIM card is not the telephone number, reading the telephone number out of the subscriber checking device on the basis of the identification code.
making a connection from the comparing device to the mobile cell phone.
transmitting the transaction data to the mobile cell phone,
outputting the data by the mobile cell phone.
requesting confirmation information through the mobile cell phone,
transmitting the confirmation data to the comparing device,
terminating the transaction if the confirmation data corresponds to a refusal.

transmitting the confirmation and optionally further transaction data to the merchant station, transmitting the transaction data from the transaction memory and the identification code of the mobile cell phone to an account keeping device and clearing the transaction from the transaction memory.

4. A method according to claim 3, characterized in that the mobile cell phone (3) and the merchant station (1) comprise interfaces for wireless transmission of data and, at the beginning of the method, the identification code associated with the SIM card is transmitted from the mobile cell phone (3) through these interfaces to the merchant station (1) and is there so stored that it can be used in the following steps at the merchant station (1).

5. A method according to any of the preceding claims, characterized in that the transaction is broken off if confirmation information is not given within a predetermined time after transmitting the information from the merchant station to the comparing device.

6. A method of effecting a cashless payment transaction by means of a merchant station (1) characterized by a merchant station identification code, with an interface for a wireless data connection, a mobile cell phone (2) with a SIM card, an identification code associated with the SIM card and an interface corresponding to the interface for the wireless connection of the merchant station, and a comparing device (3), which comprises a transaction memory device (10), a merchant checking device (11) for checking the identification codes of the merchant stations authorised for this method, and a subscriber checking device (12) for checking the identification codes of the SIM cards authorised for this method and which is connected to account keeping devices (15), comprising the steps:

making a connection between the merchant station (1) and the cell phone (2) through the interfaces for wireless data connection and transmitting the merchant identification code to the cell phone,

making a connection from the cell phone to the comparing device,
checking the authorization of the SIM card for the method using the subscriber checking device.

in the absence of authorization terminating the method,
reading in an amount of money to be paid, the identification code for the merchant station and the identification code of the mobile cell phone and transmitting these to the comparing device.

checking the authorization of the merchant station for the method using the merchant checking

device,
terminating the method in the absence of authorization, otherwise transmitting the identification codes of the merchant station and the mobile cell phone as well as the amount of money to an account keeping device,
transferring the confirmed amount of money to the merchant station.

A method according to claim 6, characterized in that as well as the merchant identification code, further data on the transaction is transmitted in the first step.

8. A method according to claim 6 or 7, characterized in that the identification code associated with the SIM card is also transmitted in the last step.
9. A method according to any of the preceding claims, characterized in that the wireless interface is an infrared interface.
10. A method according to any of the preceding claims, characterized in that the wireless interface is a microwave interface.
11. A method according to any of the preceding claims, characterized in that further supplementary transaction data is transmitted to the comparing device or mobile cell phone from the merchant station.
12. A method according to any of the preceding claims, characterized in that when one of the necessary connections cannot be made, the transaction is terminated and if required the corresponding, stored open transactions in the transaction memory (19) of the comparing device (3) are cleared.
13. A method according to any of the preceding claims, characterized in that the identification codes are replaced by the corresponding data identifying the account before transmission to the account keeping devices (15).
14. A method according to any of the preceding claims, characterized in that, when no connection can be made to the merchant station (1) or the mobile cell phone 2, at least one further attempt is made to make this connection and the process is only then terminated.

15. A method according to any of the preceding claims, characterized in that when one of the connections cannot be made, a communication is given to the merchant station (1) or the mobile cell phone (2), before the procedure is terminated.
16. A method according to any of the preceding claims, characterized in that the identification code associated with the SIM card is an identification code stored on the SIM card and identifying the card and the transmission of the identification code associated with the SIM card takes place automatically in the transmission of data between the mobile cell phone (2) and the comparing device (3).
17. A method according to any of the preceding claims, characterized in that the identification code associated with the SIM card is its telephone number.
18. A system for implementing the method according to claim 1, including a merchant station (1) characterized by a merchant station identification code, a mobile cell phone (2) with a SIM card and an identification code characterizing the SIM card, a comparing device (3), which comprises a transaction data memory device (10), a merchant checking device (11) for checking the identification codes of the merchant stations authorized for this method and a subscriber checking device (12) for checking the identification codes of the SIM cards authorized for this method and which is connected to account keeping devices (15), wherein the merchant station (1) comprises an input device and an output device (4, 5) and a device (8) for making a data connection to the mobile cell phone (2), the comparing device (3) further comprises interface devices (9) for data connection to merchant stations, interface devices (14) for mobile cell phone connections, as well as control devices (13), which after making a connection and transmitting transaction data from a merchant station, checks the authorization of the merchant station for the method, using the merchant checking device (11) and terminates the method in the absence of authorization but otherwise enters the transmitted transaction data in the transaction data memory device (10), on making a connection from a mobile cell phone (2) received the identification code of the SIM card, checks the authorization of the SIM card for the method using the subscriber checking device (12), and terminates the method in the absence of authorization, but otherwise compares the identification code with the entries in the transaction data memory device and, on finding a transaction with the same SIM card identification code, transmits the

located transaction data to the mobile cell phone through the interface device for mobile cell phone connections and also sends a request for confirmation thereto, and receives the confirmation data through the interface device for mobile cell phone connections, interprets this as acceptance or refusal, transmits the confirmation information through the interface device to the merchant station and in the case of acceptance transmits the transaction data and the identification code of the mobile cell phone to the account keeping device.

19. A system for implementing the method according to claim 3, including a merchant station (1) characterized by a merchant station identification code, a mobile cell phone (2) with a SIM card and an identification code characterizing the SIM card, and a comparing device (3), which comprises a transaction data memory device (10), a merchant checking device (11) for checking the identification codes of the merchant stations authorized for this method and a subscriber checking device (12) for checking the identification codes of the SIM cards authorized for this method, and if the identification code is not the telephone number, storing the telephone number, and which is connected to account keeping devices (15), wherein the merchant station (1) comprises an input device and an output device (4, 5) and a device (8) for making a data connection to the comparing device (3), the comparing device (3) further comprises interface devices (9) for data connection to the merchant stations, interface devices (14) for mobile cell phone connections, as well as control devices (13), which after making a connection and transmitting transaction data from a merchant station, checks the authorization of the merchant station for the method, using the merchant checking device, and the authorization of the SIM card for the method, using the subscriber checking device, and terminates the method in the absence of authorization, but otherwise enters the transmitted transaction data in the transaction data memory device, makes a connection through the interface device for mobile cell phone connections, corresponding to the identification code for the mobile cell phone contained in the transaction data, transmits the transaction data to the mobile cell phone and sends a request for confirmation to this, and receives the confirmation data through the interface device for mobile cell phone connections, interprets it as an acceptance or a refusal, in the case of acceptance transmits the confirmation information to the merchant station through the interface device and transmits the transaction data and the identification code of the mobile cell phone to the account keeping device.

20. A system for implementing the method according to claim 6, including
a merchant station (1) characterized by a merchant station identification code, with an
interface for wireless data transmission,
a mobile cell phone (2) with a SIM card, an identification code characterizing the SIM card
and an interface corresponding to the interface for wireless transmission of the merchant
station, and
a comparing device (3), which comprises a transaction data memory device (10), a merchant
checking device (11) for checking the identification codes of the merchant stations authorized
for this method and a subscriber checking device (12) for checking the identification codes
of the SIM cards authorized for this method and which is connected to account keeping
devices (15), wherein
the merchant station (1) comprises an input device and an output device (4, 5) and a device
(8) for making a data connection to the comparing device,
the comparing device (3) further comprises interface devices (9) for data connection to the
merchant stations, interface devices (14) for mobile cell phone connections, as well as control
devices (13), which on making a connection from a mobile cell phone (2), receives the
identification code of the mobile cell phone, the amount of money to be paid and the
identification code of the merchant station,
checks the authorization of the merchant station for the method, using the merchant checking
device and the authorization of the SIM card for the method, using the subscriber checking
device, and terminates the method in the absence of authorization, but otherwise transmits the
amount of money through the interface device to the merchant station and transmits the
amount of money, the identification code of the mobile cell phone and the identification code
of the merchant station to the account keeping device and clears the corresponding transaction
from the transaction data memory.
21. A system according to any of claims 18 to 20, characterized in that the comparing device (3)
comprises a subscriber checking device (12) in which is held the identification code of each
mobile cell phone and the account number associated therewith in the account keeping device,
and in that the control device transmits to the account keeping device the account number
corresponding to the identification code, on the basis of the information in the subscriber
checking device, rather than the identification code of the mobile cell phone.
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22. A system according to any of claims 18 to 20, characterized in that the comparing device (3)
comprises a merchant checking device (11) in which is held the identification code of each

merchant station and the account number associated therewith in the account keeping device, and in that the control device transmits to the account keeping device the account number corresponding to the identification code, on the basis of the information in the merchant memory device, rather than the identification code of the merchant station.

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